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ABSTRACT

First jobs and career attainments soon after graduation of college graduates with baccalaureate degrees in the humanities were studied. Outcomes for humanities majors were also compared to social science, business, and education majors, as well as graduates who majored in interdisciplinary studies in the liberal arts and sciences. Data were obtained from the National Longitudinal Study of the High School Class of 1972, which involved surveys in spring 1972 and followups in the fall and winters of 1973, 1974, 1976, and 1979. Consideration was given to: family background (e.g., parents' education and occupation), students' self-concept, personal goals, academic performance in college, and the quality of the institution attended. Multivariate analysis was used to investigated three dimensions of early career attainment: type of job obtained, income, and job satisfaction. Each occupation was also assigned a Duncan Socioeconomic prestige score. Additional study variables included work activities, supervisory responsibility, and personal career goals. Separate analyses were performed across majors by sex. It is concluded that while a sizable proportion of humanities graduates have not been launched on professional careers during the early post-college years, their work experiences have not been discouraging and have differed little from their contemporaries who majored in other fields. Detailed findings are presented, along with appendices that explain study variables and provide information on the number of bachelor's and master's degrees conferred, by major, for U.S. colleges since 1968-1969 (reported in 2-year intervals). (SW)

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EARLY CAREER PATTERNS OF UNDERGRADUATE MAJORS IN THE HUMANITIES

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EARLY CAREER PATTERNS OF UNDERGRADUATE MAJORS IN THE HUMANITIES

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Research Report Number 1

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September, 1986

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EARLY CAREER PATTERNS OF UNDERGRADUATE MAJORS IN THE HUMANITIES

Final Report
Prepared for
The National Endowment for the Humanities
Under Contract #OP20237

by

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September, 1986

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Chapter I
Introduction

The ongoing debate about the viability of the current American system of higher education in an era of vast demographic and technological changes in American society has probably had the strongest impact on the humanities. Recurring issues are on the one hand the place of the liberal arts in the undergraduate curriculum and, on the other hand, career opportunities for those who have concentrated in one of the humanities fields at the undergraduate or graduate level. While there are indications that a consensus about the need for a strong humanities component at the undergraduate level is emerging in recent reports on national education and on campuses.[1] Although the fate of Ph.D. holders in the humanities has received considerable attention in the research literature,[2] questions about career opportunities for those who specialize in humanities at the undergraduate or graduate level have not received definitive answers.

It is, however, clear that the number of graduate students and undergraduate majors in the humanities has declined dramatically since the early 1970s. At the graduate level, while the decline was part of a broader no-growth trend in the numbers of Ph.D.'s being awarded, the 35% decline in humanities Ph.D's between the peak years of 1973 and 1983 was greater than in any other field.[3] At the master's and undergraduate levels, the problem was not one of declining student populations; it was, instead, the result of shifts made in the choice of majors by students who increasingly chose technical and business fields rather than majors in the humanities, social sciences and education.

Some of these developments are illustrated by the numbers in Table 1-1 (Detailed data are shown in the Appendix, Tables 1-2). For the humanities, the trend toward a drastic decline of degree-seekers at all levels is more pronounced than in the other fields which are also facing reduced enrollments. In the social sciences, the decline has been more moderate, and while undergraduate enrollments in education have dropped drastically, graduate education remains popular, no doubt fueled by teachers who study part-time to enhance their qualifications for professional advancement. The reasons for declines in graduate and undergraduate enrollments in the humanities are complex: the change in women's carer goals and the shifts in student values and interests toward more entrepreneurial lifestyles are no doubt important elements. But there can be little doubt that the overriding element has been the concern about the availability of jobs for those whose educational background is in the humanities.

At the graduate level, the lack of employment opportunities for new Ph.D.'s has been widely publicized, as have efforts to provide training and counseling for employment in non-academic settings. But employment-related concerns have also played an important part in the shift away from the humanities among undergraduates, given the high financial burden assumed by students and parents from low and moderate income families, and the related decision of many bachelors degree holders to enter the labor force, rather than full-time graduate study.

An important additional factor was the declining labor market for teachers in elementary and secondary schools as school enrollments began to decline in the 1970s. In earlier years large numbers of human-

Table 1-1
Degrees Conferred by U.S. Institutions
(Selected Fields)

	1968-69		1977-78		1982-83	
	Number	% of All Degrees	Number	% of All Degrees	Number	% of All Degrees
English						
Bachelors	54,359	7.4	29,034	3.2	24,650	2.5
Masters	8,527	4.4	6,019	1.9	3,928	1.4
History						
Bachelors	41,079	5.6	23,004	2.5	16,465	1.7
Masters	5,276	2.7	3,033	1.0	2,040	0.7
Foreign Languages						
Bachelors	21,793	3.0	12,730	1.4	9,685	1.0
Masters	4,707	2.4	2,726	0.9	1,759	0.1
Interdisciplinary Studies[a]						
Bachelors	6,242	0.9	31,863	3.5	32,446	3.3
Masters	672	0.3	3,145	1.0	2,634	0.9
Psychology						
Bachelors	24,495	3.3	44,559	4.8	40,364	4.2
Masters	4,013	2.1	8,160	2.6	8,378	2.9
Political Science						
Bachelors	23,920	3.3	26,069	2.8	25,791	2.7
Masters	2,108	1.1	2,069	0.7	1,829	0.6
Education						
Bachelors	153,248	20.9	136,079	14.8	97,991	10.1
Masters	71,423	36.7	118,582	38.1	84,853	29.3
Business/ Management						
Bachelors	94,616	12.9	161,271	17.5	223,543	23.1
Masters	19,398	10.0	48,484	15.6	65,276	22.5
Computer Information & Sciences						
Bachelors	933	0.1	7,201	0.8	24,510	2.5
Masters	1,012	0.5	3,038	1.0	5,321	1.8

Note. More detailed tables, showing all fields and data for additional years, are included in Appendix A, as are the sources of these data.

[a]Includes general liberal arts and sciences and other programs with emphasis on humanities and social sciences (e.g., women's studies).

ities majors - English, history, and modern languages - went into the teaching field, with or without additional graduate training. No doubt, the widely publicized teacher glut, together with the growing reluctance of women to enter what was generally considered a low-paying and dead-end occupation, had a great deal to do with declining enrollment in the humanities.

Although advocates of a broad-gauged liberal education at the undergraduate level often claim that this type of non-specialized training provides the best basis for productive careers in many fields, the difficulty of linking an undergraduate education centered on the humanities with specific job outcomes has troubled educators for some time now, as reflected in these comments from a report published in 1977 by the Carnegie Foundation for the Advancement of Teaching:

> One difficulty confronted by the humanities is that, precisely when career outcomes are widely cited as significant measures of an education's ultimate worth, the humanities lack an easily identifiable professional or occupational constituency. Their graduates are widely distributed as teachers in high schools and colleges and among members of a large number of other occupational and professional fields that are not obviously related to a humanities major.[4]

There is currently very little solid information about the occupational fate of the thousands of men and women who continued to major in one of the humanities fields in recent years, despite the presumably gloomy job outlook for such graduates. More generally, the

extent to which the college major plays a decisive role in the early careers and subsequent occupational attainment for those who enter the labor force with the baccalaureate as their highest degree has not been systematically studied in recent years. The bulk of the research about the employment situation of college graduates focuses on broad measures for the total population of college graduates, and does not examine separately the situation of graduates in various fields.[5] Earlier work paid closer attention to the role of the undergraduate major in career outcomes, but much of this work is now out of date,[6] or focused on longer-term career patterns, rather than early career attainment.[7] Furthermore these studies provide little systematic information about the specific occupational destinations of humanities majors immediately following college graduation, including their salary levels, job activities, etc. Data from college placement offices tend to be incomplete, with information available only for a limited number of institutions and emphasizing salary, rather than other job characteristics.

Anecdotal evidence, rather than systematic studies, informs much of the discourse on this topic. This is especially true when it comes to recruitment preferences and practices of employers, which have never been systematically studied. The extent to which rhetoric, rather than data, are at the basis of available information is perhaps best illustrated by contradictory evidence from the General Motors Corporation: while the company's chairman in a keynote address to a major conference reported that almost 20% of the college graduates employed by that company were liberal arts graduates, highly valued because of their humanistic values and insights, an official in charge of placement and

college relations stated on a later occasion that "we've made a bigger deal on liberal arts than it's worth. It's much easier to have business people. Liberal arts people do not make it in our company."[8]

The present study assesses the early career patterns of baccalaureate majors in the humanities (e.g., English, history, linguistics, philosophy, music, fine arts etc.). It provides information, generally unavailable in the past, about the range of careers that humanities majors without graduate degrees enter following college and the salaries that they earn. Furthermore, since the perceived disadvantages of an undergraduate major in the humanities are shared by most of the other liberal arts majors, the study includes comparative analyses of selected liberal arts and social science majors.

Along with the very important descriptive presentation of early career patterns for baccalaureate humanities graduates, the study addresses analytically the early career attainment process for these graduates. This part of the study assesses the relationship of various aspects of the career attainment process identified from relevant sociological literature to the early career destinations and salaries of humanities graduates. The emphasis here is placed on assessing the relative importance of personal goals, self-concept, collegiate accomplishments, college quality, and various background characteristics for understanding patterns in early career destinations.

The present study seeks to make a modest contribution towards providing data-based answers to some of the most frequently asked questions: What kinds of jobs could college graduates who have majored in one of the humanities' fields find at a time when teaching jobs were

scarce? How do the jobs held by these men and women compare with those held by their contemporaries who have majored in other fields, and especially in business subjects? What conclusions can we draw from the experiences of recent graduates which might help guide current college freshmen and their advisors as well as those policymakers and academicians who are concerned with the place of the humanities in our educational system?

While we hope that this study will provide some much needed information about early career patterns of humanities majors, we want to stress its limitations. The data which are presented in this report are based on a broad gauged data collection effort sponsored by the National Center for Education Statistics which sought to provide national data on a sample of high school graduates during the critical years of early adulthood. Thus, college graduates were but one of many groups for whom data were collected in this study and the level of detail is obviously not as high as it would be if college graduates were the sole focus of the study. While the availability of the large NCES data base makes it possible to present a good deal of useful data in this report, there are many questions about the job search and placement process which only a more specialized survey could have answered. This report can also not shed a great deal of light on employer attitudes and practices, although we are presenting some data on the types of industries and companies for which the college graduates in this study are working. It is to be hoped that the new generation of surveys which are now being fielded and which are based on the experiences of those who were high school seniors in 1980 will

cover in greater detail some of the employment questions of special interest to the academic community, and that the present report will help set the agenda for future research priorities.

Endnotes

1. El-Khawas, Elaine (1986, February). Campus Trends 1985. Higher Education Panel Reports, No. 71. Washington, DC: American Council on Education.

2. See especially several publications from the National Academy of Sciences based on surveys of doctorate holders, in particular Belisle, Mary and Maxfield, Betty D. (1985). Humanists on the Move. Washington, DC: National Academy Press. See also Sharp, Laure (1984). The Employment Situation of Humanists 1979-1981. Washington, DC: Bureau of Social Science Research; and McPherson, Michael S. (1985). "The State of Academic Labor Markets." In Bruce L.R. Smith (ed.), The State of Graduate Education. Washington, DC: The Brookings Institute.

3. National Research Council. (1983). Doctorate Recipients from U.S. Universities: A Summary Report. Washington, DC: National Academy Press.

4. Carnegie Foundation for the Advancement of Teaching. (1977). Missions of the College Curriculum. San Francisco: Jossey-Bass, p. 104.

5. This is especially true of the labor force data and projections issued by the U.S. Department of Labor and the American Council of Education. Recent data are summarized in Henderson, Cathy and Ottinger, Cecelia. (1984, November). Employment Prospects for College Graduates. Policy Brief. Washington, DC: American Council on Education. For a comprehensive assessment of past and future trends, see Rumberger, Russell W. (1984). "The Job Market for College Graduates, 1960-1970," Journal of Higher Education. Vol. 55 (July-August): 433-454.

6. Davis, James A. (1965). Undergraduate Career Decisions. Chicago: Aldine; Sharp, Laure M. (1970). Education and Employment: The Early Career of College Students. Baltimore, MD: The John Hopkins University Press.

7. Solmon, Lewis C., Bisconti, Ann S. and Ochsner, Nancy L. (1977). College as a Training Ground for Jobs. New York: Praeger.

8. Chronicle of Higher Education. April 24, 1984 and June 5, 1984 (letters to the editor by Donald Henson).

Chapter 2
Methodology and Study Limitations

The present study builds on previous research which focused on undergraduate career socialization in academic departments, with particular attention paid to undergraduates majoring in liberal arts disciplines.[1] While this previous research suggests some distinctively different patterns of change in career values and choices during college, by both major and sex, it does not go beyond college graduation to explore how those values and preferences affect early career destinations. Not only does the present study provide important information about first jobs of humanities and other liberal arts baccalaureate majors, it also assesses the process of career attainment immediately following graduation.

To identify the important independent variables for describing and analyzing the early career attainment process, the study draws on the seminal work by Blau and Duncan as well as subsequent work focusing more specifically on the first several years of a young person's career.[2] In addition to family background characteristics (especially parental education and occupation) suggested by this research, the present study explores the effects of self-concept, personal goals, aspirations, academic performance in college, and quality of the institution from which graduates received their degrees on the process of early career attainment among humanities majors.[3]

The Data

The data for the study come from the National Longitudinal Study of the High School Class of 1972 (NLS-72) which was conducted for the National Center for Education Statistics. The NLS-72 sample represents

the twelfth grade population of three million seniors in more than 17,000 United States high schools who were enrolled in the spring of 1972. The sample includes over 22,000 individuals from more than 1,300 public and private high schools. Respondents were surveyed in the spring of 1972 and then followed-up in the fall and winter of 1973, 1974, 1976, and 1979. Intensive tracing activities resulted in an excellent longitudinal data file containing responses to the 1979 survey from 83% of the 1972 base-year sample. A complete description of these surveys is contained in the 3-volume NLS-72 DATA FILE USERS MANUAL.[4]

Methodology

The present study follows Hyman with respect to analytic approaches in secondary analysis of survey data, and Wagenaar's report based on the NLS-72 data for identification of specific variables.[5] The first stage involved identifying those respondents who had earned at least a baccalaureate degree with a major in the fields of the humanities, social sciences, business, and education. Two items on the 1979 Fourth Follow-up Questionnaire were used to accomplish this selection procedure: Item 67 (FT67), "As of the first week of October 1979, what was your highest level of college education?" (Codes 3, 4, 5: "finished college," "master's," and "Ph.D. or advanced professional degree"); and Item 76 (FT76ED), "Area of 4-year or 5-year college Bachelor's degree." Respondents were included from the following areas of the humanities and social sciences: fine arts, English, foreign languages, history, psychology, sociology, economics, and political science.[6]

Table 2-1 shows the distribution of the study sample by major area and sex for baccalaureate recipients in the humanities and social sciences. The only part of the data analysis that uses the major area distinctions shown in Table 2-1 is the presentation of descriptive information about employment. The analytical aspects of the study use data grouped into the more encompassing "humanities" and "social sciences" categories in order to maintain a sufficiently large number of cases for more robust statistical treatment.

In order to provide a comparison with other majors, three additional areas were included in the study sample: education, business, and a general category for "liberal arts and sciences (interdisciplinary)." These areas represent majors that enroll large numbers of undergraduates and, for education and liberal arts, tend to have significant humanities and social sciences components.[7] Table 2-2 shows the distribution of the study sample for the larger major categories broken down by sex and race. It is interesting to note that black women comprise a larger proportion than black men of the baccalaureate majors in each of the five fields included in the study.

Tables 2-3 and 2-4 show the distribution of the study sample by sex and the Carnegie classification of the institution from which the respondent received the baccalaureate degree.[8] These tables show that the largest proportion of majors in each of the five areas received their baccalaureate degrees from "Comprehensive Colleges and Universities - I."

Table 2-5 shows the year in which the baccalaureate was completed by major and sex. Roughly 75% of all respondents had completed their

Table 2-1
Distribution of Humanities and Social Sciences Majors in Study Sample by Discipline and Sex (In Percentages)

Discipline	Sex: Males	Sex: Females	N
Humanities			
Fine Arts	38.1%	61.9%	(155)
English	35.7	64.3	(154)
Foreign Languages	18.8	81.2	(64)
History	64.8	35.2	(128)
Humanities (Other)	68.0	32.0	(75)
Humanities Total	45.1	54.9	(576)
Social Sciences			
Psychology	47.2	52.8	(178)
Sociology	38.5	61.5	(148)
Economics	75.8	24.2	(62)
Political Science	72.8	27.2	(125)
Social Sciences (Other)	50.0	50.0	(44)
Social Science Total	54.0	46.0	(557)

Note. The specific field of study codes included in each of these majors are shown in Appendix Table A3.

Table 2-2
Distribution of Study Sample by Race, Sex, and Major (In Percentages)

	Major				
	Humanities	Social Sciences	Liberal Arts	Education	Business
Race: Males					
White	91.5%	83.3%	79.5%	87.0%	91.2%
Black	5.0	8.0	6.8	9.1	5.5
Hispanic	.8	3.3	6.9	1.9	.9
Asian-American	1.2	2.0	3.0	1.0	2.0
Other	1.5	3.5	3.8	1.0	.4
(N)	(260)	(301)	(134)	(209)	(457)
Race: Female					
White	86.9%	75.6%	82.5%	85.4%	78.8%
Black	7.3	14.6	13.9	10.2	16.8
Hispanic	1.3	2.8	.7	1.7	.6
Asian-American	2.2	2.8	.7	2.0	2.8
Other	2.3	4.2	2.2	.7	1.0
(N)	(316)	(256)	(138)	(549)	(179)

Note. Total Table N for males = 1361; total Table N for females = 1438

Table 2-3
Distribution of Study Sample by Carnegie Classification of Baccalaureate Institution and Major - Males (In Percentages)

Carnegie Classifications	Major				
	Humanities	Social Sciences	Liberal Arts	Education	Business
Research Univ. I	14.4%	18.9%	20.8%	7.6%	14.6%
Research Univ. II	10.6	8.3	16.0	6.4	9.9
Doctorate Grant. Univ. I	8.8	10.2	12.3	10.5	15.4
Doctorate Grant. Univ. II	2.3	4.3	2.8	5.3	6.8
Comprehensive Univ. - Coll. I	26.9	31.9	24.4	47.4	34.7
Comprehensive Univ. - Coll. II	11.6	10.6	2.8	8.8	7.0
Liberal Arts Coll. I	7.4	5.1	6.6	2.9	.8
Liberal Arts Coll. II	12.5	6.7	3.8	8.8	4.4
Other	5.6	4.0	8.5	2.4	6.3
(N)	(216)	(254)	(106)	(171)	(383)

Note. Total Table N = 1130, NA = 231. NA includes those individuals for whom it was not possible to identify the baccalaureate institution by pooling item responses (see Appendix B).

Table 2-4
Distribution of Study Sample by Carnegie Classification of Baccalaureate Institution and Major - Female (In Percentages)

Carnegie Classifications	Major				
	Humanities	Social Sciences	Liberal Arts	Education	Business
Research Univ. I	15.3%	20.1%	15.5%	8.2%	15.3%
Research Univ. II	12.9	10.5	8.2	6.5	8.3
Doctorate Grant. Univ. I	8.5	8.1	5.5	6.5	9.0
Doctorate Grant. Univ. II	4.0	4.3	6.4	4.5	3.5
Comprehensive Univ. - Coll. I	24.6	29.7	33.6	47.7	50.7
Comprehensive Univ. - Coll. II	14.1	10.0	8.2	12.0	8.3
Liberal Arts Coll. I	7.7	7.2	11.8	1.2	.0
Liberal Arts Coll. II	7.3	5.7	8.2	11.8	2.8
Other	5.6	4.4	2.7	1.7	2.1
(N)	(248)	(209)	(110)	(417)	(144)

Note. Total Table N = 1128, NA = 310. NA includes those individuals for whom it was not possible to identify the baccalaureate institution by pooling item responses (see Appendix B).

Table 2-5
Year Baccalaureate Completed by Sex and Major (In Percentages)

	Major				
	Humanities	Social Sciences	Liberal Arts	Education	Business
Males: BA Year					
Before 1976	5.0%	5.3%	4.5%	1.0%	3.7%
1976	53.8	59.1	47.8	53.6	57.1
1977	25.8	20.6	21.6	27.3	20.2
1978	10.0	7.6	17.9	9.1	10.8
1979	5.4	7.3	8.2	9.1	8.1
(N)	(260)	(301)	(134)	(209)	(455)
Females: BA Year					
Before 1976	7.6%	9.4%	5.1%	11.9%	10.1%
1976	64.1	64.9	66.4	63.3	59.8
1977	18.7	13.7	19.0	16.4	16.8
1978	6.0	5.1	4.4	4.5	5.6
1979	3.5	7.8	5.1	3.8	7.8
(N)	(315)	(255)	(137)	(548)	(179)

Note. Total Table N for males = 1359, NA = 2; total Table N for females - 1434, NA = 4.

baccalaureate degrees by 1977, or within five years of high school graduation. The proportion of respondents who had done at least some graduate study beyond the baccalaureate ranged from 16.8% for female business majors to 45.8% for male humanities majors. This is shown in Table 2-6.

The second stage of the data analysis involved multivariate analyses designed to show the complex relationships among variables that explain more directly the correlates of three dimensions of early career attainment: type of job obtained, income received from the job, and satisfaction with the job. For this analysis, all variables were scaled on at least an ordinal metric. Each occupation was also assigned its Duncan Socioeconomic Index (SEI) prestige score.[9]

Less tangible aspects of career attainment (e.g., work activities, supervisory responsibility, and personal career goals) are also considered with job prestige and income. This supplemental approach is particularly important for this sort of study because it is well-documented that majors in the humanities and social sciences are less interested in material aspects of jobs and more interested in intrinsic rewards than are majors in business and technical fields.[10] The construction of all variables used in the data analysis is described in Appendix B.

Furthermore, not only are the types of job activities preferred (e.g., the Dictionary of Occupational Titles "People-Data-Thing" classification) likely to differ by major field, sex, and race, there is substantial evidence that career attainment processes are significantly different.[11] Consequently, separate analyses are performed

Table 2-6
Post-Baccalaureate Study by Major and Sex (n Percentages)

	Major				
	Humanities	Social Sciences	Liberal Arts	Education	Business
Males: Post-BA Study					
None	54.2%	56.8%	68.7%	63.6%	79.2%
Masters Study	18.5	13.3	8.2	23.0	10.5
Earned Masters Degree	8.1	9.0	3.7	8.5	5.9
Professional Degree Study	8.8	6.0	12.7	.0	1.3
Earned Post-Masters or Prof. Degree	7.3	8.6	4.5	4.8	2.8
Doctoral Study	3.1	6.3	2.2	.0	.2
(N)	(260)	(301)	(134)	(209)	(457)
Females: Post-BA Study					
None	68.7%	65.2%	65.2%	61.9%	83.2%
Masters Study	11.1	10.2	15.9	24.2	9.5
Earned Masters Degree	8.5	10.2	8.0	10.0	1.1
Professional Degree Study	2.5	4.3	2.9	.2	1.1
Earned Post-Masters or Prof. Degree	7.0	7.4	5.1	3.5	5.0
Doctoral Study	2.2	2.7	2.9	.2	.0
(N)	(316)	(256)	(138)	(549)	(179)

Note. Total Table N for males = 1361; total Table N for females = 1438.

across majors by sex. Race is also included as a variable when there are sufficient cases to warrant its inclusion.

Two sorts of multivariate analyses are performed. For those survey items having multiple parts, composite scores for discrete dimensions are derived by using the theoretical strategy of scale development outlined by Hase and Goldberg as well as factor analysis of item clusters.[12] The self-concept and locus of control scales in the data file have already been validated.[13] Second, multiple regression analyses are done separately by sex to ascertain which of the variables are the strongest correlates of job prestige and income.[14] Specific attention is paid to assessing the importance of baccalaureate major field for early career attainment.

Limitations of the Data

Because of the magnitude of the data collection effort represented in the National Longitudinal Survey of the High School Class of 1972, there are several problems with the data. First is the problem of missing data. There appears to be a rather random pattern of missing data throughout the data field so that the numbers of missing responses vary from one item to another. Consequently, the analyses are performed in ways that are designed to maximize the amount of valid data employed. This means, however, that the numbers of cases will vary somewhat from table to table.

A second problem has to do with the representativeness of the samples of majors that are used. The cases used in the analyses were drawn through a "backward" selection process, i.e., only those who both received baccalaureate degrees in one of the majors fields under inves-

tigation and completed all five surveys over the seven-year time period were included. Consequently, the samples used in the data analyses are not necessarily representative of all 1972 high school graduates who had earned baccalaureate degrees with majors in these fields. The samples are simply relatively large subsets of baccalaureate majors from a diverse set of institutions dispersed across the United States. Consequently, it is inappropriate to use the sampling weights included in the data file to produce population estimates. The comprehensive, longitudinal nature of the NLS-72 surveys, however, makes them a unique source of data on college graduates not otherwise available and justifies their use in a study of this sort.[15]

Endnotes

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6. A listing of specific majors included in each area is shown in Appendix Table A-3.

7. The Business area included major codes 501 through 517; Education included codes 801 through 899; and Liberal Arts (Interdiscip-

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15. For a discussion of the methodological problems involved with "backward selection" procedures, see Hauser, Robert, M. (1970). "Educational Stratification in the United States," Sociological Inquiry. Vol. 40 (Winter): 102-129.

Chapter 3
Employment Status and Jobs Held in 1979

As shown in the previous chapter (Table 2-5), only about two-thirds of the 1972 high-school graduates in our study who had gone on to college and had obtained a 4-year degree prior to 1979 had received that degree by 1976. Furthermore, many had obtained some additional training at the post-graduate level, although relatively few held an advanced degree by 1979 (Table 2-6). Thus, the data on employment status and jobs held describes a population which has been in the labor market at most for three years since the undergraduate degree and varied with respect to their level of work experience and post-graduate training. However, since humanities majors did not differ markedly from graduates in the other fields under investigation with respect to year of graduation and graduate degrees obtained, comparability across fields is not impaired by these factors.

Labor Force Status

The overwhelming majority of these young college graduates were working full-time in October of 1979; this was true of men and women and of graduates in all major fields. However, as shown in Tables 3-1 (A-C), humanities majors - both men and women - were less likely to work full-time than those who had majored in other fields and especially in business or education. Men and women did not differ in this respect. When the data are examined by detailed humanities field (Table 3-2), no major differences can be noted - and of course, since the samples are quite small, these data must be treated cautiously.

Table 3-1A
Labor Force Status of College Graduates in October 1979, by Field (All Graduates)

Field	Total Number with Major		Working Full-Time[a]		Working Part-Time[b]		Looking or Waiting for Work[c]		Other[d]	
	No.	%	No.	%	No.	%	No.	%	No.	%
Humanities	576	100	422	73	126	22	28	5	-	-
Social Sciences	557	100	428	77	90	16	31	6	8	1
Liberal Arts	272	100	208	76	42	16	9	3	13	5
Education	758	100	633	83	97	13	20	3	8	1
Business	636	100	587	92	32	5	15	3	2	*

Note. Population consists of 1972 high-school graduates who had obtained a bachelor's degree by 1979. For details, see Chapter 2.

[a]Thirty hours or more.

[b]Less than thirty hours per week.

[c]Actual question wording: "on temporary layoff from work," "looking for work," or "waiting to report for work."

[d]Includes full-time students, those on active duty in the armed forces, homemakers, and those for whom labor force status data were missing.

*Less than 1%

Table 3-1B
Labor Force Status of College Graduates in October 1979, by Field (Men)

Field	Total with Major No.	Total with Major %	Working Full-Time[a] No.	Working Full-Time[a] %	Working Part-Time[b] No.	Working Part-Time[b] %	Looking or Waiting for Work[c] No.	Looking or Waiting for Work[c] %	Other[d] No.	Other[d] %
Humanities	260	100	191	73	57	22	12	5	-	-
Social Sciences	301	100	233	77	48	16	20	7	-	-
Liberal Arts	134	100	102	76	18	14	4	3	10	7
Education	209	100	186	89	18	9	5	2	-	-
Business	457	100	425	93	22	5	10	2	-	-

Note. Population consists of 1972 high-school graduates who had obtained a bachelor's degree by 1979; for details, see Chapter 2.

[a]Thirty hours per week or more.

[b]Less than thirty hours per week.

[c]Actual question wording: "on temporary layoff from work," "looking for work," or "waiting to report for work."

[d]Includes full-time students, those on active duty in the armed forces, homemakers, and those who whom labor force status data were missing.

Table 3-1C
Labor Force Status of College Graduates in October 1979, by Field (Women)

Field	Total with Major No.	Total with Major %	Working Full-Time[a] No.	Working Full-Time[a] %	Working Part-Time[b] No.	Working Part-Time[b] %	Looking or Waiting for Work[c] No.	Looking or Waiting for Work[c] %	Other[d] No.	Other[d] %
Humanities	316	100	231	73	68	22	16	5	1	*
Social Sciences	256	100	195	76	40	16	11	4	10	4
Liberal Arts	138	100	106	77	24	17	5	4	3	2
Education	549	100	447	81	76	14	15	3	11	2
Business	179	100	162	91	10	6	5	3	2	*

Note. Population consists of 1972 high-school graduates who had obtained a bachelor's degree by 1979. For details, see Chapter 2.

[a]Thirty hours per week or more.

[b]Less than thirty hours per week.

[c]Actual question wording: "on temporary layoff from work," "looking for work," or "waiting to report for work."

[d]Includes full-time students, those on active duty in the armed forces, homemakers, and those for whom labor force status data were missing.

*Less than 1%.

Table 3-2
Humanities Graduates Working Full-Time in October 1979, by Field and Sex

Field	All Graduates			Men			Women		
	Total Number With Major	Number & Percentage Working Full-Time Number	%	Total Number With Major	Number & Percentage Working Full-Time Number	%	Total Number With Major	Number & Percentage Working Full-Time Number	%
Art	155	106	68	59	41	69	96	65	68
Foreign Languages	64	46	72	12	8	66	52	38	73
English	154	117	76	55	40	73	99	77	78
Humanities, Other	75	55	73	51	41	80	24	14	58
History	128	98	77	83	61	73	45	37	82
Total	576	442	73	260	191	73	316	231	73

Note. Population consists of 1972 high-school graduates who had obtained a bachelor's degree by 1979; for details, see Chapter 2.

and graduate study. Unemployment in October of 1979 was only rarely reported, although more frequently by graduates in the humanities and social sciences than by those in business and education (Table 3-A). The high incidence of part-time work and the greater frequency of unemployment suggest that in the early post-college years humanities and social science majors are somewhat less likely than graduates in the other fields examined in this study to establish themselves in career occupations: they are more likely to work in temporary or stop-gap positions. While it can be assumed that their part-time work status is largely voluntary (because of graduate study commitments), the data suggest that even many of those who work full-time have not yet embarked on a career path.

Occupational Outcomes

Evidence on this point is found through an examination of the specific jobs held by humanities graduates who are working full-time, as summarized in Tables 3-3 through 3-8 (A and B). The A tables show the broad Census classes into which these jobs fell; in the B tables only jobs held by at least 2 graduates are listed. As a result, a great many jobs held by only one graduate are grouped into the "all other" category. The most interesting information which can be gleaned from both sets of tables is a rough approximation of the extent to which humanities graduates have found work that is in line with their major field of study or, more generally, in an occupation for which a college degree is a required or preferred credential. Clearly it is impossible to make a definitive assessment as to whether any given job is related to a given major or requires college-level training for

Table 3-3A
Full-Time Jobs Held in 1979 by Baccalaureate Graduates with Art Majors (Broad Occupational Classification)

Category	Men No.	Men %	Women No.	Women %
Professional & Technical	16	37	33	47
Managers & Administrators	8	18	14	20
Sales & Clerical	7	16	18	26
Crafts	5	11	1	1
Laborers, Operatives, Service Workers	8	18	4	6

Note. In this and all subsequent tables, missing cases have been omitted;

Full-Time = working more than 30 hours per week.

Table 3-3B
Full-Time Jobs Held in 1979 by Baccalaureate Graduates with Art Majors (Modal Jobs in Percentages)

Code	Job	Men No.	Men %	Women No.	Women %
		41		65	
56	Personnel and labor relations workers				5
143	Prekindergarten, kindergarten teachers				5
144	Secondary school teachers				5
145	Teachers, except college, univ., n.e.c.		7		3
183	Designers				6
190	Painters and sculptors				6
191	Photographers		5		
230	Restaurant, cafeteria, bar managers				3
245	Managers and administrators, n.e.c.		17		9
310	Cashiers				3
372	Secretaries, n.e.c.				3
394	Miscellaneous clerical workers				9
915	Waiters, waitresses		5		
	All Other Jobs		66		43

Notes. Full-Time = working more than 30 hours per week;

Modal Jobs = reported by at least 2 respondents.

Table 3-4A
Full-Time Jobs Held in 1979 by Baccalaureate Graduates with Foreign Language Majors (Broad Occupational Classification)

Category	Men No.	Men %	Women No.	Women %
Professional & Technical	5	56	13	33
Managers & Administrators	1	11	11	27
Sales & Clerical	1	11	14	35
Crafts	-	-	-	-
Laborers, Operatives, Service Workers	2	22	2	5
TOTAL	9	100	40	100

Note. Full-Time = working more than 30 hours per week.

Table 3-4B
Full-Time Jobs Held in 1979 by Baccalaureate Graduates with Foreign Language Majors (Modal Jobs in Percentages)

Code	Job	Men No.	Men %	Women No.	Women %
		8		38	
144	Secondary school teachers				5
145	Teachers, except college, univ., n.e.c.		25		13
205	Buyers: wholesale and retail trade				5
245	Managers and administrators, n.e.c.				16
283	Sales clerks: retail trade				4
372	Secretaries, n.e.c.				5
394	Miscellaneous clerical workers				5
	All Other Jobs		75		47

Notes. Full-Time = working more than 30 hours per week;

Modal Jobs = reported by at least 2 respondents.

Table 3-5A
Full-Time Jobs Held in 1979 by Baccalaureate Graduates with English Majors (Broad Occupational Classification)

Category	Men No.	Men %	Women No.	Women %
Professional & Technical	19	47	36	44
Managers & Administrators	5	12	11	14
Sales & Clerical	12	29	30	37
Crafts	-	-	1	1
Laborers, Operatives, Service Workers	4	10	3	4
Military	1	2	-	-
TOTAL	41	100	81	100

Note. Full-Time = working more than 30 hours per week.

Table 3-5B
Full-Time Jobs Held in 1979 by Baccalaureate Graduates with English Majors (Modal Jobs in Percentages)

Code	Job	Men No.	Men %	Women No.	Women %
		40		77	
3	Computer programmers		5		
31	Lawyers		10		3
32	Librarians				4
56	Personnel and labor relations workers				3
144	Secondary school teachers				13
145	Teachers, except college, univ., n.e.c.				12
184	Editors and reporters		7		
194	Writers, artists, entertainers, n.e.c.		5		3
231	Sales managers and dept. heads: retail				4
245	Managers and administrators, n.e.c.		7		6
260	Advertising agents and salesmen				3
265	Insurance agents, brokers, underwriters		5		
281	Sales representatives: manufacturing		5		
283	Sales clerks: retail trade				3
305	Bookkeepers				4
372	Secretaries, n.e.c.				9
390	Ticket, station, express agents				3
	All Other Jobs		56		30

Notes. Full-Time = working more than 30 hours per week;

Modal Jobs = reported by at least 2 respondents.

Table 3-6A
Full-Time Jobs Held in 1979 by Baccalaureate Graduates with History Majors (Broad Occupational Classification)

Category	Men No.	Men %	Women No.	Women %
Professional & Technical	19	29	24	63
Managers & Administrators	13	20	2	5
Sales & Clerical	12	19	9	24
Crafts	4	6	-	-
Laborers, Operatives, Service Workers	12	19	3	8
Military	5	7	-	-
TOTAL	65	100	38	100

Note. Full-Time = working more than 30 hours per week.

Table 3-6B
Full-Time Jobs Held in 1979 by Baccalaureate Graduates with History Majors (Modal Jobs in Percentages)

Code	Job	Men No.	Men %	Women No.	Women %
		61			37
31	Lawyers		10		16
56	Personnel and labor relations workers				8
142	Elementary school teachers				5
144	Secondary school teachers		5		
145	Teachers, except college, univ., n.e.c.		7		8
245	Managers and administrators, n.e.c.		13		
281	Sales representatives: manufacturing		7		
372	Secretaries, n.e.c.				5
392	Machine operatives, not specified		3		
755	Gardeners, groundskeepers, exc. farm		5		
961	Firemen, fire protection		3		
992	Military		8		
	All Other Jobs		39		58

Notes. Full-Time = working more than 30 hours per week;

Modal Jobs = reported by at least 2 respondents.

Table 3-7A
Full-Time Jobs Held in 1979 by Baccalaureate Graduates with All Other Humanities Majors (Broad Occupational Classification)

Category	Men No.	Men %	Women No.	Women %
Professional & Technical	19	45	6	40
Managers & Administrators	4	10	2	13
Sales & Clerical	6	14	7	47
Crafts	3	7	-	-
Laborers, Operatives, Service Workers	10	24	-	-
Military	5	7	-	-
TOTAL	42	100	15	100

Note. Full-Time = working more than 30 hours per week.

Table 3-7B
Full-Time Jobs Held in 1979 by Baccalaureate Graduates with All Other Humanities Majors (Modal Jobs in Percentages)

Code	Job	Men No.	Men %	Women No.	Women %
		41		14	
86	Clergy		12		
90	Religious workers, n.e.c.		12		
145	Teachers, except college, univ., n.e.c.				14
174	Vocational and educational counselors		5		
245	Managers and administrators, n.e.c.		5		
281	Sales representatives: manufacturing		5		
283	Sales clerks: retail trade				14
751	Construction laborers		5		
	All Other Jobs		56		72

Notes. Full-Time = working more than 30 hours per week;

Modal Jobs = reported by at least 2 respondents.

Table 3-8A
Full-Time Jobs Held in 1979 by Baccalaureate Graduates with Psychology Majors (Broad Occupational Classification)

Category	Men No.	Men %	Women No.	Women %
Professional & Technical	23	37	39	49
Managers & Administrators	14	23	12	15
Sales & Clerical	16	26	20	26
Crafts	1	1	2	3
Laborers, Operatives, Service Workers	7	12	6	7
Military	1	1	-	-
TOTAL	62	100	79	100

Note. Full-Time = working more than 30 hours per week.

Table 3-8B
Full-Time Jobs Held in 1979 by Baccalaureate Graduates with Psychology Majors (Modal Jobs in Percentages)

Code	Job	Men No.	Men %	Women No.	Women %
		60		70	
31	Lawyers		3		
56	Personnel and labor relations workers		10		6
75	Registered nurses				4
76	Therapists				3
93	Psychologists				6
100	Social workers				9
143	Kindergarten, prekindergarten teachers				3
145	Teachers, except college, univ., n.e.c.		3		3
174	Vocational and educational counselors				9
202	Bank officers and financial managers				4
231	Sales managers and dept. heads: retail		5		
235	School administrators, college				4
245	Managers and administrators, n.e.c.		10		6
265	Insurance agents, brokers, underwriters		5		
282	Sales representatives: wholesale trade		3		
283	Sales clerks: retail trade		7		
305	Bookkeepers				3
321	Estimators and investigators, n.e.c.		3		
372	Secretaries, n.e.c.				7
602	Assemblers		3		
910	Bartenders				3
925	Nursing aides, orderlies, attendants		3		
	ALL OTHER JOBS		45		30

Notes. Full-Time = working more than 30 hours per week;

Modal Jobs = reported by at least 2 respondents.

those who majored in the humanities, social sciences or liberal arts.

Young workers employed in the two top Census classifications (Professional & Technical, and Managerial & Administrative positions) can be assumed to be predominantly college graduates, but college may also be a requirement (or a strong employer preference) for recruitment into some types of sales and clerical positions. Furthermore, the miscellaneous service category, which primarily consists of unskilled occupations, includes a few categories for which college education may be required or preferred (for example, child care, school and welfare aides, dental assistants).

It appears that between 50% and 60% of humanities graduates landed professional or managerial positions; in two fields (art and history) women did so somewhat more often than men, primarily because more of them were working as teachers. When occupational outcomes for humanists are compared with those of graduates who had majored in the other fields included in this study, it appears that graduates in most other fields did somewhat better (Tables 3-9 through 3-15), with the proportion working in college level occupations more often exceeding 60% (Table 3-16).

The best case was for those who had majored in education, where over two-thirds of the graduates were working in professional or technical level occupations. But even in some of the social sciences and in the liberal arts, it appears that more baccalaureate holders had embarked on professional careers than was the case for the humanities. In some of these fields too, women tended to do better than men, at least in terms of the criteria we used, no doubt because they were able

Table 3-9A
Full-Time Jobs Held in 1979 by Baccalaureate Graduates with Sociology Majors (Broad Occupational Classification)

Category	Men No.	Men %	Women No.	Women %
Professional & Technical	18	36	37	49
Managers & Administrators	11	22	11	15
Sales & Clerical	5	10	17	23
Crafts	2	4	2	3
Laborers, Operatives, Service Workers	12	24	9	10
Military	2	4	-	-
TOTAL	50	100	77	100

Note. Full-Time = working more than 30 hours per week.

Table 3-9B
Full-Time Jobs Held in 1979 by Baccalaureate Graduates with Sociology Majors (Modal Jobs in Percentages)

Code	Job	Men No.	Men %	Women No.	Women %
		48		70	
56	Personnel and labor relations workers				3
100	Social workers		10		20
142	Elementary school teachers				6
143	Kindergarten, prekindergarten teachers				3
145	Teachers, except college, univ., n.e.c.				4
174	Vocational and educational counselors		4		
222	Officials and administrators; public admin.		6		
231	Sales managers and dept. heads: retail		6		
240	School administrators; elem., secondary				3
245	Managers and administrators, n.e.c.		6		7
305	Bookkeepers				3
372	Secretaries, n.e.c.				3
394	Miscellaneous clerical workers				4
610	Checkers, examiners, inspectors: manufact.		4		
903	Janitors and sextons		4		
922	Health aides, exc. nursing				3
964	Policemen and detectives		6		3
992	Military		4		
	ALL OTHER JOBS		50		38

Notes. Full-Time = working more than 30 hours per week;

Modal Jobs = reported by at least 2 respondents.

Table 3-10A
Full-Time Jobs Held in 1979 by Baccalaureate Graduates with Economics Majors (Broad Occupational Classification)

Category	Men No.	Men %	Women No.	Women %
Professional & Technical	14	35	6	50
Managers & Administrators	10	25	1	8
Sales & Clerical	12	30	5	42
Crafts	1	2	-	-
Laborers, Operatives, Service Workers	2	5	-	-
Military	1	3	-	-
TOTAL	40	100	12	100

Note. Full-Time = working more than 30 hours per week.

Table 3-10B
Full-Time Jobs Held in 2979 by Baccalaureate Graduates with Economics Majors (Modal Jobs in Percentages)

Code	Job	Men No.	Men %	Women No.	Women %
		38		11	
3	Computer programmers		5		
31	Lawyers		11		18
91	Economists		5		
195	Research workers, not specified		5		
202	Bank officers and financial managers		5		
231	Sales managers and dept. heads: retail		4		
245	Managers and administrators, n.e.c.		16		
271	Stock and bond salesmen		8		
321	Estimators and investigators, n.e.c.		5		
	ALL OTHER JOBS		36		82

Notes. Full-Time = working more than 30 hours per week;

Modal Jobs = reported by at least 2 respondents.

Table 3-11A
Full-Time Jobs Held in 1979 by Baccalaureate Graduates with Political Science Majors (Broad Occupational Classification)

Category	Men No.	Men %	Women No.	Women %
Professional & Technical	25	33	12	43
Managers & Administrators	25	33	6	21
Sales & Clerical	14	18	9	32
Crafts	1	1	-	-
Laborers, Operatives, Service Workers	3	4	1	4
Military	8	11	-	-
TOTAL	78	100	28	100

Note. Full-Time = working more than 30 hours per week.

Table 3-11B.
Full-Time Jobs Held in 1979 by Baccalaureate Graduates with Political Science Majors (Modal Jobs in Percentages)

Code	Job	Men No.	Men %	Women No.	Women %
		68		26	
31	Lawyers		10		23
145	Teachers, except college, univ., n.e.c.		3		
153	Elect., electron. engineer. technicians		3		
202	Bank officers and financial managers		3		
222	Officials and administrators: public admin.				12
231	Sales managers and dept. heads: retail		9		
245	Managers and administrators, n.e.c.		19		8
265	Insurance agents, brokers, underwriters		3		
282	Sales representatives: wholesale		4		
283	Sales clerks: retail trade		3		8
394	Miscellaneous clerical workers				12
705	Delivery men and route men		3		
992	Military		10		
	ALL OTHER JOBS		30		37

Notes. Full-Time = working more than 30 hours per week;

Modal Jobs = reported by at least 2 respondents.

Table 3-12A
Full-Time Jobs Held in 1979 by Baccalaureate Graduates with Interdisciplinary Social Science Majors (Broad Occupational Classification)

Category	Men No.	Men %	Women No.	Women %
Professional & Technical	10	53	6	30
Managers & Administrators	6	32	4	20
Sales & Clerical	1	5	8	40
Crafts	1	5	-	-
Laborers, Operatives, Service Workers	1	5	2	10
TOTAL	19	100	20	100

Note. Full-Time = working more than 30 hours per week.

Table 3-12B.
Full-Time Jobs Held in 1979 by Baccalaureate Graduates with Interdisciplinary Social Science Majors (Modal Jobs in Percentages)

Code	Job	Men No.	Men %	Women No.	Women %
		19		18	
95	Urban and regional planners		11		
144	Secondary school teachers		11		
145	Teachers, except college, univ., n.e.c.		11		
202	Bank officers and financial managers				11
922	Health aides, exc. nursing				11
	ALL OTHER JOBS		67		78

Notes. Full-Time = working more than 30 hours per week;

Modal Jobs = reported by at least 2 respondents.

Table 3-13A
Full-Time Jobs Held in 1979 by Baccalaureate Graduates with Liberal Arts Majors (Broad Occupational Classification)

Category	Men No.	Men %	Women No.	Women %
Professional & Technical	40	36	55	49
Managers & Administrators	23	20	20	18
Sales & Clerical	21	19	27	24
Crafts		8	7	22
Laborers, Operatives, Service Workers	16	14	7	6
Military	4	4	1	1
TOTAL	112	100	112	100

Note. Full-Time = working more than 30 hours per week.

Table 3-13B
Full-Time Jobs Held in 1979 by Baccalaureate Graduates with Liberal Arts Majors (Modal Jobs in Percentages)

Code	Job	Men No.	Men %	Women No.	Women %
		102		106	
31	Lawyers		4		
75	Registered nurses				3
76	Therapists				4
100	Social workers				4
142	Elementary school teachers				7
144	Secondary school teachers				4
145	Teachers, except college, univ., n.e.c.		3		14
195	Research workers, not specified				3
202	Bank officers and financial managers		4		
231	Sales managers and dept. heads: retail		3		4
245	Managers and administrators, n.e.c.		9		8
281	Sales representatives: manufacturing				3
282	Sales representatives: wholesale		3		
301	Bank tellers				3
326	Insurance adjusters, examiners		3		
372	Secretaries, n.e.c.				4
394	Miscellaneous clerical workers		4		
992	Military		4		
	ALL OTHER JOBS		63		39

Notes. Full-Time = working more than 30 hours per week;

Modal Jobs = reported by at least 2 respondents.

Table 3-14A
Full-Time Jobs Held in 1979 by Baccalaureate Graduates with Education Majors (Broad Occupational Classification)

Category	Men No.	Men %	Women No.	Women %
Professional & Technical	126	68	352	75
Managers & Administrators	18	10	19	4
Sales & Clerical	16	9	79	17
Crafts	8	4	4	1
Laborers, Operatives, Service Workers	11	5	16	3
Military	7	4	1	*
TOTAL	188	100	471	100

Note. Full-Time = working more than 30 hours per week.

*Less than 1%

Table 3-14B
Full-Time Jobs Held in 1979 by Baccalaureate Graduates with Education Majors (Modal Jobs in Percentages)

Code	Job	Men No.	Men %	Women No.	Women %
		186		447	
101	Recreation workers		3		
142	Elementary school teachers		6		21
143	Kindergarten, prekindergarten teachers				4
144	Secondary school teachers		12		8
145	Teachers, except college, univ., n.e.c.		33		33
245	Managers and administrators, n.e.c.		5		
372	Secretaries, n.e.c.				3
394	Miscellaneous clerical workers				3
992	Military		4		
	ALL OTHER JOBS		37		28

Notes. Full-Time = working more than 30 hours per week;

Modal Jobs = reported by at least 2 respondents.

Table 3-15A.
Full-Time Jobs Held in 1979 by Baccalaureate Graduates with Business Majors (Broad Occupational Classification)

Category	Men No.	Men %	Women No.	Women %
Professional & Technical	145	34	62	37
Managers & Administrators	127	29	36	21
Sales & Clerical	109	25	65	39
Crafts	19	4	3	2
Laborers, Operatives, Service Workers	25	6	-	-
Military	9	2	2	1
TOTAL	434	100	168	100

Note. Full-Time = working more than 30 hours per week.

Table 3-15B
Full-Time Jobs Held in 1979 by Baccalaureate Graduates with Business Majors (Modal Jobs in Percentages)

Code	Job	Men No.	Men %	Women No.	Women %
		425		162	
1	Accountants		24		28
202	Bank officers and financial managers		6		6
231	Sales managers and dept. heads: retail		6		4
245	Managers and administrators, n.e.c.		12		6
265	Insurance agents, brokers, underwriters		3		
281	Sales representatives: manufacturing		4		
282	Sales representatives: wholesale trade		3		
305	Bookkeepers				5
372	Secretaries, n.e.c.				9
394	Miscellaneous clerical workers				6
	ALL OTHER JOBS		42		36

Notes. Full-Time = working more than 30 hours per week;
Modal Jobs = reported by at least 2 respondents.

Table 3-16
Percentage of All Jobs Held in 1979 Classified as Professional/ Technical or Managerial/Administrative, by Major Field and Sex

Field	Men	Women
Art	58%	67%
Foreign Languages	67	60
English	59	58
History	49	68
All Other Humanities	55	53
Psychology	60	64
Sociology	58	64
Economics	60	58
Political Science	66	64
Interdisciplinary Social Science	85	50
Liberal Arts	56	67
Education	78	79
Business	63	58

(or willing) to accept traditionally female jobs which are professional in nature but are often low paid (e.g., social workers, counselors).

In evaluating these data, it should also be noted that in three fields (history, political science, and economics) a number of graduates were working as lawyers, presumably because they had obtained a law degree since graduation from college. Because of the way in which the NLS data were coded, we were unable in this study to fully take into account post-graduate education when evaluating job outcomes, but as shown in Chapter 2 (Table 2-6), 10-15% of the graduates in this study hold masters' or professional degrees. Thus, it may well be that among graduates in professional jobs in all fields, a similar proportion of advanced degree holders are included.

Because the graduates in this study were employed in a great variety of occupations, and Tables 3-3B through 3-15B contain only partial information about the actual jobs held, we used a summary measure to gauge occupational status and compare humanists and graduates in other fields on that dimension. The Duncan scale of socio-economic status is one of several scales which have been developed by sociologists to measure the socio-economic status or "prestige" of occupations. Duncan SEI scores for occupations reported by all survey respondents are included in the NLS file, and were thus available for this analysis. The scores are based on the education and income characteristics of those employed in each of 446 detailed occupational titles for which scores were developed.[1] These are two-digit scores, ranging from a high of 96 to a low of 0. The high score category (90-96) includes selected professions (for example, physicians and

surgeons, lawyers and judges, architects and dentists). Categories between 60 and 90 include other professionals (for example, teachers, pharmacists, accountants) as well as higher level business and managerial occupations. Most occupations with scores below 60 probably do not require college-level preparation although a few professional occupations have relatively low scores because they yield low incomes for the majority of job holders in these categories (clergy, dancers, musicians). In general the Duncan scores should not be equated with indicators of college-level employment; they merely show the relative standing of various jobs, based on income as well as education.

Tables 3-17 through 3-20 compare the Duncan scores of jobs held by men and women and by full-time and part-time workers. Among those employed full-time, men who had majored in the humanities and liberal arts majors had the lowest scores; more of them are in the lowest prestige cluster, and fewer in the highest cluster than is true of any other field. Among women, the patterns for liberal arts and humanities graduates are very similar. It is worth noting that these data confirm our earlier hunch that among humanities majors, women tend to do somewhat better than men. Clearly, in terms of Duncan scores, business majors in full-time jobs - male and female - outrank all others; this finding reflects the placement of many of these graduates as accountants and in managerial positions. For those working part-time, the findings are less clear except that close to half of the humanities and social science graduates of both sexes are in the lowest of the three categories in Tables 3-19 and 3-20.

In and by themselves, none of the data shown here - labor force

Table 3-17
Prestige Level (Duncan Scale) of Jobs Held by Men Employed Full-Time in 1979, by Major Field

	Duncan Scale						
	4.9 - 61.3		61.4 - 69		69.1 - 96		
Major Field	No.	%	No.	%	No.	%	Median
Humanities (N=194)	89	45.9	61	31.4	44	22.7	61.8
Social Sciences (N=235)	75	31.9	81	34.5	79	33.6	62.3
Liberal Arts (N=108)	47	43.5	33	30.6	28	25.9	61.8
Education (N=181)	35	19.3	92	50.8	54	29.8	62.3
Business (N=422)	112	26.5	111	26.3	199	47.2	66.0

Table 3-18
Prestige Level (Duncan Scale) of Jobs Held by Women Employed Full-Time in 1979, by Major Field

	Duncan Scale						
	4.9 - 61.3		61.4 - 69		69.1 - 96		
Major Field	No.	%	No.	%	No.	%	Median
Humanities (N=244)	87	35.7	80	32.8	77	31.6	62.3
Social Sciences (N=215)	77	35.8	72	33.5	66	30.7	64.0
Liberal Arts (N=111)	37	33.3	45	40.5	29	26.1	62.3
Education (N=470)	99	21.1	200	42.6	171	36.4	62.3
Business (N=165)	45	27.3	42	25.5	78	47.3	66.0

Table 3-19
Prestige Level (Duncan Scale) of Jobs Held
By Men Employed Part-Time in 1979, by Major Field

	Duncan Scale						
	4.9 - 61.3		61.4 - 69		69.1 - 96		
Major Field	No.	%	No.	%	No.	%	Median
Humanities (N=58)	28	48.3	12	20.7	18	31.0	61.8
Social Sciences (N=50)	27	54.0	10	20.0	13	26.0	52.3
Liberal Arts (N=18)	10	55.6	2	11.1	6	33.3	49.8
Education (N=21)	9	42.9	10	47.6	2	9.5	61.9
Business (N=22)	7	31.8	7	31.8	8	36.4	62.1

Table 3-20
Prestige Level (Duncan Scale) of Jobs Held By Women Employed Part-Time in 1979, by Major Field

	Duncan Scale						
	4.9 - 61.3		61.4 - 69		69.1 - 96		
Major Field	No.	%	No.	%	No.	%	Median
Humanities (N=68)	32	47.1	22	32.4	14	20.6	61.8
Social Sciences (N=40)	18	45.0	7	17.5	15	37.5	61.8
Liberal Arts (N=24)	5	20.8	10	41.7	9	37.5	62.3
Education (N=76)	15	19.7	31	40.8	30	39.5	62.4
Business (N=10)	6	60.0	2	20.0	2	20.0	59.7

participation, occupational classification of jobs held, specific job titles, and occupational prestige as measured by Duncan SEI - provide clear-cut indicators of vast differences in the occupational experiences of humanities graduates compared to their peers who had majored in other fields. However, taken together, the data suggest that more of the humanities' graduates - and especially the men - experience difficulties in embarking on careers commensurate with their educational background than is true in most other fields.

Endnotes

1. Although the original Duncan scores were developed on the basis of data obtained in 1960, periodic re-examination and comparisons between Duncan scores and other prestige ratings based on opinion survey data have established the validity of this scoring system for the occupational structure in the 1970s. (See Census Technical Paper #26, "1970 Occupation and Industry Elements.") Also, see Duncan, Otis D. (1961). "A Socioeconomic Index for All Occupations," Chapter IV and Appendix B in Albert J. Reiss, Jr. (Ed.), Occupations and Social Status, New York: Free Press.

Chapter 4
Characteristics of Jobs Held in 1979

In this chapter, we present information about the types of work activities (i.e., people-data-things) reported by respondents with baccalaureate degrees in each of the five major areas, the various types of employers and employment settings, and salaries. We also explore similarities and differences across majors in respondents' perceptions and work aspirations, focusing specifically on satisfaction with their jobs and the aspects of jobs (e.g., security, autonomy, etc.) that are perceived by these college graduates to be desirable.

Employer Characteristics

Tables 4-1 and 4-2 compare humanities graduates and those who obtained bachelor's degree in other fields with respect to employment setting, salaries and other job characteristics. As can be seen, humanities graduates found jobs primarily in the private sector; relatively few of them worked for government agencies or in other public settings. In fact only business majors were more likely to work in the private sector; in all other fields substantial numbers of graduates found employment in the public sector. Humanities graduates also worked most often in organizations with fewer than 1,000 employees, but - with the exception of business graduates - this was true of graduates in all other fields as well.

Salary

Because salary differentials between comparably educated men and women continue to persist despite public and private efforts to end

Table 4-1
Type of Employer for Jobs Held in 1979 by Major Field

Field	Private Organization No.	%	Public Organization No.	%	Self-Employed No.	%	Total No.	%
Humanities	418	76	108	20	23	4	549	100
Social Sciences	350	66	161	30	21	4	532	100
Liberal Arts	171	69	74	30	3	1	248	100
Education	373	51	346	48	6	1	725	100
Business	525	85	78	13	15	2	615	100

Notes. Includes full-time and part-time jobs;

Excludes respondents who did not answer this question (missing cases).

Table 4-2
Size of Employing Organization for Jobs Held in 1979, by Major Field

Field	Fewer Than 1,000 No.	%	1,000 or More No.	%	Total No.	%
Humanities	370	76	114	24	484	100
Social Science	339	73	124	27	463	100
Liberal Arts	159	75	54	25	213	100
Education	477	79	129	21	506	100
Business	327	58	236	42	563	100

Notes. Includes full-time and part-time jobs;

Excludes missing cases.

discriminatory practices and for reasons only partly explained by occupational choice, salary data (gross hourly earnings) are presented separately for men and women in Table 4-3. The figures show a much narrower span in the salary range for women than is the case for men, and a consistent earnings advantage for men in all fields, with the gap narrowest (and the earnings lowest for men) in the field of education. Men who had majored in the humanities reported higher earnings than those in education, but lower earnings than those in all other fields. Among women only business majors stood out as high earners.

One of the surprising findings in Table 4-3 is the high earnings reported by men - and to a lesser extent - by women who had majored in liberal arts. There are few clues in the data to explain this phenomenon: liberal arts majors did not differ markedly from graduates in other fields with respect to college background (selectivity of institutions attended), post-graduate study, occupational destination and occupational prestige (See Tables 3-17 and 3-18). The one possible explanation is the higher concentration of liberal arts graduates in business and managerial occupations, which could account for these higher earnings and suggests that some employers when recruiting junior management staff may give preference to graduates with broad liberal arts training as against those with a more specialized humanities or social science background. It is also possible that some of these liberal arts graduates had taken considerable course work in mathematics and the natural sciences, which qualified them for more highly paid jobs.

Table 4-3
Gross Hourly Earnings in 1979 of Graduates Who Were Employed Full-Time (More Than 30 Hours Per Week), by Major Field and Sex

	Men		Women	
Field	No.	Mean Hourly Earnings	No.	Mean Hourly Earnings
Humanities	187	$5.80	228	$5.25
Social Sciences	228	$6.28	192	$5.50
Liberal Arts	98	$7.15	101	$5.93
Education	183	$5.48	441	$5.25
Business	415	$6.90	153	$6.51

Work Activities

Graduates in the different fields are compared with respect to the self-assessments they made concerning another aspect of their job: the extent to which they felt that they spent much or little of their time dealing with ideas (thinking), dealing with people, dealing with machinery or other "things," and doing paperwork (Table 4-4). Self-assessments if this type yield at best very rough indicators, given the subjective nature of the assessment, the tendency of most respondents to select the middle category ("some") and the fact that most jobs held by young college graduates are, indeed, likely to entail spending some time doing each of the four activities, with the possible exception of dealing with machinery and other "things."

The data in Table 4-4 contain few surprises, although it is interesting that education majors (both male and female) score highest in every category except paperwork, on which business majors report spending more time than graduates in other fields. Humanities majors, except for working with things, by contrast, report the lowest amounts of time spent on all activities. Although differences between fields appear to be small, analyses of variance (ANOVA's) show that many are statistically significant. Those that distinguished humanities majors from graduates in other fields are shown in Table 4-5.

Self-Assessment of the Employment Situation: Satisfaction with Work and Pay

The 1979 questionnaire asked these young graduates to describe their satisfaction or dissatisfaction with their current (1979) job with respect to a number of dimensions ranging from pay and fringe

Table 4-4
Time on Jobs[1] Working with Ideas, People, Things, and Paper, by Major and Sex (Full-Time Employed Graduates)

	Men[2]				Women[3]			
Field	Ideas	People	Things	Paper	Ideas	People	Things	Paper
Humanities	3.19	3.42	2.72	2.91	3.33	3.64	2.84	3.41
Social Sciences	3.20	3.62	2.29	3.18	3.29	3.78	2.33	3.35
Liberal Arts	3.31	3.76	2.41	3.08	3.57	3.80	2.76	3.45
Education	3.56	3.88	2.78	3.24	3.58	3.93	2.98	3.52
Business	3.35	3.71	2.29	3.49	3.35	3.48	2.53	3.76

[1]Based on answers to the question: "The following are some general things that people do on their jobs. About how much time did you spend on each in the average work day on your job?"

a. Working with things (machinery), apparatus, art materials, etc.
b. Doing paperwork (administrative), clerical, computational, etc.
c. Working with ideas, thinking.
d. Dealing with people (as part of the job).

Possible answers were: 1 - none
2 - very little
3 - some
4 - a great deal

[2]The number of respondents to this question is as follows: humanities-182, social sciences-223, liberal arts-93, education-169, business-407. A few respondents did not answer all parts of the question.

[3]The number of respondents to this question is as follows: humanities-221, social sciences-180, liberal arts-100, education-415, business-153. A few respondents did not answer all parts of the question.

Table 4-5
Time on Job Working with Ideas, People, Things and Doing Paperwork - Significant Differences Between Humanities Majors and Graduates in Other Fields:

	Men	Women
Working with Ideas	Less than education	No differences
Working with People	Less than education Less than social sciences Less than liberal arts Less than business	Less than education
Working with Things	More than social sciences More than business	More than social sciences
Doing Paperwork	Less than business Less than education Less than social sciences	Less than business

Notes. See Footnote 1, Table 4-4;

$p<.05$.

benefits to opportunities for advancement, and importance and challenge of the work. Following factor analysis, these were reduced to two broad groupings or factors: satisfaction with work and satisfaction with pay. (For details, see Appendix B.) For each factor, a rating of 2.5 is average, and the higher the rating, the higher the level of satisfaction. Table 4-6 lists the average ratings for both factors, and shows that the majority of these graduates were reasonably well satisfied with their work situation, but less so with the financial aspects of the job. The best paid graduates (those who had majored in business, and - among men - in liberal arts) were more satisfied in this respect than those in other fields, but the differences were not large. Analyses of variance showed no significant differences between humanities majors and those who had majored in other fields with respect to satisfaction with work or pay with one exception: women humanists were significantly less satisfied with their pay than women who had majored in business.

Work Goals

Respondents were asked to indicate the importance of several considerations in choosing their life's work. Factor analysis was used to reduce the ten items into three factors (see Appendix B for details): security (permanence, good starting income, opportunity for advancement), autonomy (interesting and important work, freedom to make own decisions), and experience (previous work in same area, friend in same line of work, work matches hobby). These items were asked of respondents in both the 1976 and 1979 surveys so it was possible to do a comparison during the early post-college career period on each of

Table 4-6
Satisfaction with Work and with Pay in 1979, by Major and Sex (Full-Time Employed Graduates)

Major Field	Satisfaction with Work[1]		Satisfaction with Pay[2]	
	Men	Women	Men	Women
Humanities	3.03	3.02	2.92	2.90
Social Science	3.06	2.95	2.98	2.84
Liberal Arts	3.02	3.08	3.06	2.91
Education	3.16	3.08	2.91	2.99
Business	3.15	3.15	3.07	3.19

Based on answers to the question: "How satisfied were you with the following aspects of this job?" the following nine items were included and ranked 4 (very satisfied), 3 (satisfied), 2 (dissatisfied), or 1 (very dissatisfied):

Importance and challenge . . . . . .
Working conditions . . . . . .
Opportunity for promotion and advancement with this employer. . . . . .
Opportunity for promotion and advancement in this line of work . . . .
Opportunity to use past training and education . . . . . .
Supervisor(s). . . . . .
Opportunity for developing new skills. . . . . .
Job as a whole . . . . . .
The pride and respect I received from my family and friends by being in this line of work. . . . . .

[2]Based on answers to the same question in Footnote 1, above, with respect to the following items: Pay, Fringe benefits, and Security and permanence.

Table 4-7
Work Goals by Major within Sex for Full-Time (More than 30 Hours Per Week) Jobs (Mean Scores)

Security

	1976		1979	
Major	Men	Women	Men	Women
Humanities	8.85	9.21	9.35	9.56
Social Sciences	9.58	9.61	9.94	9.97
Liberal Arts	9.50	9.39	9.88	9.56
Education	9.65	9.64	9.93	10.01
Business	10.32	10.54	10.30	10.49

Autonomy

	1976		1979	
Major	Men	Women	Men	Women
Humanities	8.05	8.34	8.18	8.31
Social Sciences	8.16	8.33	8.17	8.25
Liberal Arts	8.15	8.09	8.31	8.19
Education	8.32	8.35	8.16	8.33
Business	8.18	8.30	8.16	8.18

Experience

	1976		1979	
Major	Men	Women	Men	Women
Humanities	5.08	5.41	5.45	5.53
Social Sciences	4.99	5.15	5.43	5.32
Liberal Arts	5.21	5.32	5.43	5.57
Education	5.83	5.62	5.92	5.76
Business	4.93	5.00	5.52	5.32

Table 4-8
Regression: 1979 Job Characteristics for Men Employed Full-Time (More than 30 Hours Per Week)

	Dependent Variables			
Independent Variables	Duncan SEI	Hourly Gross	Work Satis.	Pay Satis.
Work: Administrative/Clerical	.273	-.127	-.118	.054
Work: Machines	-.243	-.110		.090
Work: Ideas	.165	.070	.366	.133
Major in Education	.114	-.117		-.071
Major in Business	.105		.074	
Cass-Birnbaum Selectivity	.094	-.061	-.071	
Major in Social Sciences	.085	-.093		
College GPA	.085	.070		
Locus of Control (76)	.066			
Father's Job Status	.056			
Life Goals: Work (76)	-.054		.058	
Type: Private	-.052		.076	
Work Goals: Experience (76)	-.048			
Years Post-BA	.041	.072		
Size of Workplace	.039	.127		
Type: Carnegie Classifications		.160		
Low Supervision on Job		.138		
Major in Humanities		-.124		
Work: People		-.069		
Life Goals: Community (76)		-.066		
Supervisory Responsibility		-.064		
Self-Concept (76)		-.046	-.128	-.121
Duncan SEI for 1979 Job			.247	
Gross Hourly Wage for 1979 Job			.076	.268
Parents' SES			.071	
Work Goals: Security (76)				.083
R-square	.334	.146	.296	.155

Note: Table shows only significant ($p<.05$) Beta Coefficients.

Table 4-9
Regression: 1979 Job Characteristics for Women Employed Full-Time (More than 30 Hours Per Week)

Independent	Dependent Variables: Duncan SEI	Hourly Gross	Work Satis.	Pay Satis.
Work: Ideas	.288	.124	.326	.065
Work: Administrative/Clerical	.146			.060
Work: Machines	-.144	-.114		
Parents' SES	.125	.107		-.143
Major in Business	.115			.121
Major in Education	.108	-.121		
Self-Concept (76)	-.078		-.098	-.088
College GPA	.074		-.050	-.058
Major in Humanities	.067	-.109		
Years Post-BA	.059			
Work: People	-.058			
Earned Advanced Degree	.056	.088		
Life Goals: Family (76)	-.045		-.059	
Race: Nonwhite		.105		.066
Major in Social Sciences		.105		-.072
Work Goals: Autonomy (76)		-.085		
Duncan SEI for 1979 Job			.147	
Low Supervision on Job			.098	.047
Gross Hourly Wage			.058	.267
Type: Private				-.105
Father's Education				.101
Father's Job Status				.062
R-square	.198	.120	.242	.170

Note: Table shows only significant ($p<.05$) Beta Coefficients.

these factors. Table 4-7 shows the results of these comparisons.

With respect to the goal of job security, majors in all five areas became even more security conscious over the three-year period. There was, however, no change in the relative importance assigned to job security by each of the five majors, with business majors highest and humanities majors lowest. An analysis of variance revealed that business majors were significantly higher on this factor than humanities majors for both sexes. For the goal of job autonomy, there were virtually no changes across majors in the importance assigned during the three-year period nor were there any significant differences between majors. For the goal of experience, there was a general increase in assigned importance over the three years. Not surprisingly, prior experience was assigned greatest importance by education majors, but only for men were education majors significantly higher than humanities majors on this factor.

A Composite View

The role played by the major in the graduates' post college occupational fate and in satisfaction with their work situation and the financial aspects of the jobs emerges more clearly from the regression analyses presented in Tables 4-8 and 4-9. Besides the major, a number of independent variables have been included; these are often believed to be associated with the chances for landing a desirable and well paid job, such as the quality (selectivity) and other characteristics of the undergraduate institution attended, parents' socio-economic background, college grades, etc. Other variables included in these analyses are measures of the characteristics of the work situation, and

graduates' career goals and expectations expressed in 1976, when the majority of these graduates obtained the degree or were close to completing their college education.

For men and women, the most important source of work satisfaction was the extent to which the job enabled them to work with ideas, in other words, involved intellectual activity. Conversely, work of a predominantly clerical/administrative nature had a negative impact on work satisfaction. While there was a positive relationship between pay and work satisfaction for both men and women, the coefficient for this factor is very small, suggesting that for these college graduates, the extent to which the work is intellectually satisfying is more important than the earnings it yields. Pay satisfaction is of course associated with the actual hourly wage earned (the Beta coefficient for men is .268, for women .267) but even here, the importance of working with ideas affects satisfaction, especially for men.

Compared to all the other variables which were included in this analysis, having majored in the humanities had a very small effect on the four outcomes examined here: job status (Duncan SEI), hourly gross wage, work satisfaction, and pay satisfaction. For men, there was only one significant coefficient: a negative relationship between a humanities major and hourly wages. For women, there was a small positive relationship with job status. Table 4-9 suggests that women humanities majors were holding more prestigious jobs than women who had majored in the social sciences (but less prestigious ones than those who had majored in business or education). With respect to work and pay satisfaction, humanities majors were neither more nor less satisfied than

graduates who had majored in other fields, despite the fact that their earnings tended to be lower.

Another way to interpret these findings is to look at the coefficients for the other majors shown in Tables 4-8 and 4-9. For social science majors, the numbers are very similar to those in the humanities row: negative association with pay, but no difference with respect to work and pay satisfaction. For men who majored in education there is a negative coefficient between major and pay satisfaction, suggesting greater dissatisfaction with earnings for this group than for social science and humanities majors, despite the fact that the analyses also shows that their actual earnings disadvantage is not as great as it is for men in the humanities (-.117 in education, -.124 for humanities). Male business majors are the only ones for whom a (very small) correlation between major and work satisfaction was present. For women who majored in business, however, this was not the case; for them there was a significant association between major and pay satisfaction, but not with work satisfaction.[1]

Endnotes

1. Of course, it should be remembered that the coefficients for majors must be interpreted as effects relative to "liberal arts and sciences (interdisciplinary)" majors, the omitted category (including a dummy for all majors would over-determine the equation). As we have seen, these liberal arts majors appeared to be at a relative advantage in the labor market when compared with the four other majors.

Chapter 5
The Broader Perspective

We conclude from the analyses presented in Chapter 4 that while a sizable proportion of humanities' graduates have not been launched on professional careers during the early post-college years, their work experiences have not been discouraging. In fact, they differed little in this respect from their contemporaries who had majored in other fields, including those who had selected a major where job matches were more frequent (education and business). Furthermore, with respect to observable outcomes - prestige of jobs, pay, and extent to which jobs entailed working with ideas - humanities majors did not differ drastically from graduates in other fields, although they tended to be at or near the bottom of a fairly narrow scale. What matters to these young college graduates - and from what we know from other studies also to comparably educated older persons, is the extent to which the job satisfies their need for using their mind and intelligence. This, rather than monetary rewards is a key ingredient of job satisfaction for most college-educated workers.

There remain, however, three issues against which these findings should be evaluated: Have the employment opportunities for humanities majors diminished in recent years? What can we anticipate about the longer-term employment prospects from these early career outcomes? Will humanities majors be worse off - and less satisfied with their working lives - as the years go by?

Trends: Comparison with Earlier Studies

Few data based studies have addressed in depth the question of early careers of college graduates in recent years. Most studies

examined the employment and income situation of the total population of college graduates and did not analyze the data separately by major field of study. Furthermore, comparability between the findings from the few studies conducted in the sixties and seventies that were based on national samples and the present research is impaired by differences in coverage and methodology.

Relevant national data for earlier periods were collected by Solmon and his associates at UCLA[1], by the U. S. Bureau of Labor Statistics[2], and by Sharp[3]. Solmon and his associates concentrated in their studies on long-term career patterns, rather than career attainment, and provided little systematic information about the specific employment status and occupational destinations of the graduates from whom they obtained follow-up information.

The Bureau of Labor Statistics (BLS) data were based on a survey conducted in October 1971 of persons aged 18 to 34 who received the bachelor's degree in 1970. At that time, unemployment rates were very high for those who had majored in humanities (13 percent unemployed) and social sciences (9 percent) as compared to graduates in other fields (business, 5 percent; education, 6 percent; all other fields 5 percent). These data reflect the weak job market of the early 1970s, but also the fact that unemployment tends to be high during the first year following graduation. Although the BLS data did not provide detailed information about the actual occupational distribution of the employed graduates, the relationship between first job and major field of study was examined: unrelated work (as against directly or somewhat related work) was reported by 50 percent of the humanities majors and

60 percent of the social science majors, as against 21 percent for education, 18 percent for business, and 22 percent for all other fields.

Sharp's earlier research is conceptually closer to the present study, but the follow-up period for which data were obtained was five years after graduation (rather than three, or less, as is the case in the present study). Nevertheless, the earlier data provide probably the best available trend information. Five years after graduation, 35 percent of male humanities and arts majors and 26 percent of male social science majors were employed as teachers; for women the respective percentages were 64 and 56 percent. Business and management occupations were reported by 14 percent of men and 4 percent of women who had majored in arts and humanities in 1958; and clerical, sales and other non-professional jobs were held by 9 percent of the men and 11 percent of the women.

These data suggest that job opportunities of a professional nature have indeed diminished for humanities majors, primarily because fewer teaching jobs were available in 1979. Of course, in the earlier period, it was especially women who relied heavily on employment as teachers, but the proportion of men who taught (usually at the high school level) after graduating with a degree in the arts or humanities was also high. While the proportion of these graduates who found employment in higher level business occupations has apparently increased since the sixties, especially for women, it would appear that this increase was not sufficient to compensate for the lack of teaching jobs; thus, the larger proportion of graduates in semi-professional and sub-profes-

sional occupations which was observed in the 1979 data.

Early Careers and Long-Term Career Outcomes

There is a more personal side to the labor market experiences of college graduates, one that is not tapped by the vagaries of supply and demand. It must be remembered that the particular college students who we have been studying are just moving out of adolescence and are becoming, for the first time, independent. Hence, it is to be expected that a period of exploration will continue into the first few years of employment beyond the baccalaureate, even for those who don't pursue advanced degrees. Furthermore, humanities majors appear to be among the least career-oriented of college graduates. Katchadourian and Boli have made the following observations about humanities majors at Stanford:

> Their career choices are...quite varied. But they seem to make their choices more by default than by active choice, and they feel less certain of their career choices than students of any other type. They also vacillate among alternative career choices more than other types.[4]

Given the foregoing considerations, it is important that the early career be recognized as providing important experience but by no means as being a final destination. A much clearer picture of ultimate career destinations awaits a subsequent follow-up of the present study's respondents.[5]

The Uncertain Job Future for the College Educated Population

Many economists who base their observations and conclusions primarily on aggregate data for all college graduates and rely heavily on wage data as an indicator of the quality of employment have concluded that in general the job market for college graduates has

deteriorated. They also believe that this deterioration will continue, because the growth in educational attainment of the U. S. labor force during the last two decades was much more rapid than the growth in high-level professional jobs, leading to increasing levels of non-professional employment for college graduates[6]. Our more fine-grained analysis suggests that graduates who had majored in the humanities and social sciences were most seriously affected by this development.

Thus, one might hypothesize that in the long run, as careers begin to solidify, a sizable proportion (perhaps as many as 20-30%) of these humanities majors amd to a lesser extent social science majors, will not be able to gain a solid foothold in the world or work which is commensurate with their educational background. This is especially true of men. The data suggest that those who are working full-time and are not employed in professional and technical occupations cluster at the lower end of the occupational scale, in sales, clerical and service occupations, rather than in upper-level managerial and business occupations, where business graduates are found. While the gap in earnings and prestige among men who majored in different fields is not great three years after graduation when most graduates are still in fairly low-paying positions, it is likely to increase over time.

There is, however, another possible outcome for humanities majors. Unlike social science majors, they were affected most drastically by the decline in teaching jobs. If job opportunities for teachers improve again, there are indications that demographic factors as well as renewed concern with the quality of public education and the

substantive preparation of teachers may, indeed, result in expanded recruitment. Given the relatively small cohorts of humanities majors who will be graduating in the late eighties, young humanists may well find themselves in a better employment market a few years from now. Clearly, a longer time perspective is needed to establish the extent to which the career outcomes of humanities majors differ from those of men and women who have majored in other fields, and whether these differences in turn affect levels of work satisfaction.

Endnotes

1. Solmon, Leis C., Bisconti, Ann S., and Ochsner, Nancy L. (1977). College as a Training Ground for Jobs. New York: Praeger.

2. Perrella, Vera C. (1973, February). "Employment of Recent College Graduates," Monthly Labor Review.

3. Sharp, Laure M. (1970). Education and Employment. Baltimore, MD: Johns Hopkins University Press.

4. Katchadourian, Herant A. and Boli, John. (1985). Careerism and Intellectualism Among College Students. San Francisco: Jossey-Bass, p. 227.

5. This fifth follow-up is, in fact, expected to be completed in 1986.

6. Runberger, Russell W. (1984, July-August). "The Job Market for College Graduates 1960-90," Journal of Higher Education. Vol. 55: 433-454.

APPENDIX A

APPENDIX TABLE A1
Bachelor's Degrees Conferred by U. S. Institution of Higher Education

Major Field of Study	1968-69		1971-72		1974-75		1977-78		1980-81		1982-83	
	#	%	#	%	#	%	#	%	#	%	#	%
HUMANITIES:												
English	54,359	7.4	55,478	6.3	39,654	4.3	29,034	3.2	25,270	2.7	24,650	2.5
Foreign Languages	21,793	3.0	18,849	2.1	18,172	2.0	12,730	1.4	10,319	1.1	9,685	1.0
Philosophy	6,118	0.8	5,939	0.7	5,348	0.6	4,015	0.4	3,643	0.4	3,322	0.3
History	41,079	5.6	43,695	4.9	31,768	3.4	23,004	2.5	18,301	2.0	16,465	1.7
INTERDISCIPLINARY STUDIES[a]	6,242	0.9	12,702	1.4	24,277	2.6	31,863	3.5	30,514	3.3	32,446	3.3
AREA STUDIES[b]	1,961	0.3	2,777	0.3	3,066	0.3	2,855	0.3	2,585	0.3	2,664	0.3
FINE & APPLIED ARTS	31,640	4.3	33,831	3.8	41,061	4.4	40,951	4.4	40,479	4.3	39,251	4.0
PSYCHOLOGY	24,495	3.3	43,093	4.9	51,436	5.5	44,559	4.8	40,833	4.4	40,364	4.2
SOCIAL SCIENCES:												
Economics	16,907	2.3	15,231	1.7	14,118	1.5	15,661	1.7	18,753	2.0	20,517	2.1
Political Science & Government	23,920	3.3	28,135	3.2	29,314	3.1	26,069	2.8	24,977	2.7	25,791	2.7
Sociology	26,555	3.6	35,216	4.0	31,817	3.4	22,750	2.5	17,272	1.8	14,105	1.5
Other Social Sciences[c]	27,369	3.7	36,027	4.1	29,756	3.2	25,745	2.8	21,344	2.3	18,517	1.9
PHYSICAL & LIFE SCIENCES[d]	87,639	11.9	85,086	9.6	95,421	10.2	90,643	9.8	81,837	8.8	78,743	8.1

[a]There is some slight variation in the coverage of this category from year to year. The largest sub-field is "general liberal arts and sciences;" other sub-fields included here have a social science and/or humanities component (e.g. peace studies or women's studies). Interdisciplinary studies in the natural sciences or combining engineering and science are not included here, but are included in the "physical and life sciences" category.

[b]Multi-disciplinary geographic area studies. Coverage of this category varies slightly over the years.

[c]Includes anthropology, geography, international relations, urban and ethnic group studies.

[d]Includes physics, chemistry, biology, geology, mathematics, and interdisciplinary studies.

APPENDIX TABLE A-1
Bachelor's Degree (Continued)

Major Field of Study	1969-69		1971-72		1974-75		1977-78		1980-81		1982-83	
PROFESSIONAL STUDIES:	#	%	#	%	#	%	#	%	#	%	#	%
Education	153,248	20.9	191,172	21.5	168,749	18.1	136,079	14.8	108,265	11.6	97,991	10.1
Public Affairs & Services[e]	5,541	0.8	12,605	1.4	28,597	3.1	37,240	4.0	36,311	3.9	32,405	3.3
Communications[f]	N/A		12,340	1.4	19,249	2.1	25,400	2.8	31,282	3.3	36,954	3.8
Health Professions	20,004	2.7	28,611	3.2	49,476	5.3	59,434	6.5	63,649	6.8	64,614	6.7
Engineering	41,553	5.7	51,164	5.8	47,303	5.1	55,654	6.0	75,000	8.0	89,199	9.2
Business & Commerce Mgt.	94,616	2.9	122,009	13.8	135,455	14.5	161,271	17.5	200,876	21.5	223,543	23.1
Computer & Information Sciences	933	0.13	3,402	0.4	5,039	0.5	7,201	0.8	15,121	1.6	24,510	2.5
ALL OTHER:[g]	48,030	6.5	49,911	5.6	62,587	6.7	69,046	7.5	68,509	7.3	73,768	7.6
ALL FIELDS:	734,002	100.0	887,273	100.0	931,663	100.0	921,204	100.0	935,140	100.0	969,504	100.0

[e]Includes public administration, social work, law enforcement, parks and recreation management. There is some slight variation in the coverage of this category from year to year.

[f]Includes journalism, radio-television and advertising.

[g]Includes agriculture, architecture, home economics, theology.

APPENDIX TABLE A-2
Master's Degrees Conferred by U. S. Institutions of Higher Education

Major Field of Study	1968-69		1971-72		1974-75		1977-78		1980-81		1982-83	
	#	%	#	%	#	%	#	%	#	%	#	%
HUMANITIES:												
English	8,527	4.4	8,423	3.3	7,296	2.5	6,019	1.9	4,602	1.6	3,928	1.4
Foreign Languages	4,707	2.4	4,616	1.8	3,826	1.3	2,726	0.9	2,104	0.7	1,759	0.6
Philosophy	695	0.4	615	0.2	699	0.2	564	0.2	469	0.2	467	0.2
History	5,276	2.7	5,217	2.1	4,236	1.4	3,033	1.0	2,237	0.8	2,040	0.7
INTERDISCIPLINARY STUDIES[a]	672	0.3	1,562	0.6	2,996	1.0	3,145	1.0	3,255	1.0	2,634	0.9
AREA STUDIES[b]	870	0.4	973	0.4	1,140	0.4	925	0.3	742	0.3	772	0.3
FINE & APPLIED ARTS	7,414	3.8	7,537	3.0	8,363	2.8	9,036	2.9	8,629	2.9	8,742	3.0
PSYCHOLOGY	4,013	2.1	5,289	2.1	7,104	2.4	8,160	2.6	7,998	2.7	8,378	2.9
SOCIAL SCIENCES:												
Economics	2,113	1.1	2,224	0.9	2,133	0.7	1,995	0.6	1,911	0.6	1,972	0.7
Political Science/ Government	2,108	1.1	2,451	1.0	2,333	0.8	2,069	0.7	1,875	0.6	1,829	0.6
Sociology	1,656	0.9	1,944	0.8	2,112	0.7	1,611	0.5	1,240	0.4	1,112	0.4
Other Social Sciences[c]	4,133	2.1	5,608	2.2	6,128	2.1	5,926	1.9	4,654	1.6	4,212	1.5
PHYSICAL & LIFE SCIENCES[d]	18,370	9.4	18,094	7.2	17,099	5.8	16,116	5.2	14,113	4.8	14,116	4.9

[a]There is some slight variation in the coverage of this category from year to year. The largest sub-field is "general liberal arts and sciences;" other sub-fields included here have a social science and/or humanities component (e.g., peace studies or women's studies). Interdisciplinary studies in the natural sciences or combining engineering and science are not included here, but are included in the "physical and life sciences" category.

[b]Multi-disciplinary geographic area studies. Coverage of this category varies slightly over the years.

[c]Includes anthropology, geography, international relations, urban and ethnic group studies.

[d]Includes physics, chemistry, biology, geology, mathematics, and interdisciplinary studies.

APPENDIX TABLE A-2
Master's Degrees (Continued)

Major Field of Study	1968-69		1971-72		1974-75		1977-78		1980-81		1982-83	
PROFESSIONAL STUDIES	#	%	#	%	#	%	#	%	#	%	#	%
Education	71,423	36.7	97,880	38.9	120,233	40.9	118,582	38.1	98,381	33.3	84,853	29.3
Public Affairs & Services[e]	6,436	3.3	9,365	3.7	15,505	5.3	19,953	6.4	20,074	6.8	18,019	6.2
Communications[f]	N/A		2,200	0.9	2,796	1.0	3,296	1.1	3,105	1.0	3,502	1.2
Health Professions	4,116	2.1	7,207	2.9	10,842	3.7	14,325	4.6	16,515	5.6	17,068	5.9
Engineering	15,243	7.8	16,960	6.7	15,359	5.2	16,398	5.3	16,709	5.6	19,350	6.7
Business & Commerce Mgt.	19,398	10.0	30,433	12.1	36,450	12.4	48,484	15.6	58,018	19.6	65,276	22.5
Computer & Information Sciences	1,012	0.5	1,977	0.8	2,299	0.8	3,038	1.0	4,218	1.4	5,321	1.8
ALL OTHER:[g]	16,232	8.3	21,058	8.4	24,702	8.4	26,219	8.4	24,890	8.4	24,570	8.5
ALL FIELDS:	194,414	100.0	251,633	100.0	293,651	100.0	311,620	100.0	295,739	100.0	289,921	100.0

[e]Includes public administration, social work, law enforcement, parks and recreation management. There is some slight variation in the coverage of this category from year to year.

[f]Includes journalism, radio-television, and advertising.

[g]Includes agriculture, architecture, home economics, and theology.

Sources for Table 1 and
Appendix Tables A-1, A-2:
(in chronological order of data by columns)

Hooper, Mary Evans and Chandler, Marjorie O. Earned Degrees Conferred, 1968-69: Part A - Summary Data. (Washington: U. S. National Center for Education Statistics, 1971) Table 5.

Grant, W. Vance and Lind, C. George. Digest of Education Statistics, 1975 Edition. (Washington: U. S. National Center for Education Statistics, 1971) Table 104.

Baker, Curtis O. and Wells, Agnes Q. Earned Degrees Conferred: 1974-75 Summary Data. (Washington: U. S. National Center for Education Statistics, 1977) Table 5.

Grant, W. Vance and Eiden, Leo J. Digest of Education Statistics, 1980. (Washington: U. S. National Center for Education Statistics, 1980) Table 110.

Grant, W. Vance and Snyder, Thomas D. Digest of Education Statistics, 1983-84. (Washington: U. S. National Center for Education Statistics, 1983) Table 100.

U. S. National Center for Education Statistics. Unpublished data, 1985.

Table A-3
Humanities and Social Sciences Major Codes
For Respondents Included in Study Sample

Fine Arts	
1001	Fine Arts, General
1002	Sculpture, Painting, Art, Drawing
1003	Art: History, Appreciation
1004	Music: Theory, Performing, Composition
1005	Music (Liberal Arts Program)
1006	Music: Appreciation, History, Musicology
1007	Dramatic Arts
1008	Dance
1009	Art: Applied Design
1010	Cinematography
1011	Photography
1099	Fine and Applied Arts: Other
English	
1501	English: General
1502	English: Literature
1503	Comparative Literature
1504	Classics
1505	Linguistics
1506	Philology
1507	Creative Writing
Foreign Languages	
1101	Foreign Languages: General
1102	French
1103	German
1105	Spanish
1106	Russian
1108	Japanese
History	
313	American Studies
2205	History
Humanities	
305	African Studies
307	Slavic Studies
308	Latin American Studies
310	European Studies: General
311	Eastern European Studies
1509	Philosophy
1510	Religious Studies
2301	Theological Studies
2302	Religious Music
2304	Religious Education

Table A-3 continued

Economics		
	2204	Economics
Political Science		
	2206	Geography
	2207	Government, Political Science
	2210	International Relations
Psychology		
	2001	Psychology: General
	2005	Social Psychology
	2010	Physiological Psychology
Sociology		
	2202	Anthropology
	2203	Archeology
	2208	Sociology
	2209	Criminology
Social Sciences		
	2201	Social Sciences: General
	2214	Urban Studies

Note. Codes for majors are listed in Volume I, Appendix C. of the NLS-72 DATA FILE USERS MANUAL.

APPENDIX B

Appendix B

Variable Construction

PARENTAL SOCIO-ECONOMIC STATUS (SES) VARIABLES

All of the parental SES indicators are composite variables included in the NLS-72 data file, as described in Volume II. Appendix K of the NLS-72 DATA FILE USERS MANUAL.

Father's Job Status: Duncan SEI score for the occupation of the respondent's father.

Father's Education: Ranges from 1 for "less than high school" to 5 for "MA. Ph.D."

Mother's Education: Same scores as "Father's Education."

Parents' SES: Described in Appendix K of the NLS-72 DATA FILE USERS MANUAL as ". . . an equally weighted linear composite of father's education, mother's education, father's occupation, family income, and the household items from the first follow-up and/or base-year student questionnaire."

CHARACTERISTICS OF THE RESPONDENT'S 1979 JOB

Duncan SEI for 1979 Job: Composite variable, Duncan SEI of response to 1979 job item (FT12A-D).

Gross Hourly Wage: Gross weekly pay reported for 1979 job (FT24) divided by average hours worked per week (FT22).

The following work activities were derived from items with these instructions - "The following are some general things that people do on their jobs. About how much time did you spend on each in the average work day on your job?" Responses ranged from 1 for "None" to 4 for "A Great Deal."

Work: Machines: "Working with things (machinery, apparatus, art materials, etc.)" (FT25A)

Work: Administrative/Clerical: "Doing paperwork (administrative, clerical, computational, etc.)" (FT25B)

Work: Ideas: "Working with ideas, thinking." (FT25C)

Work: People: "Dealing with people (as part of the job)." (FT25D)

Size of Workplace: "About how many of these people worked in the same plant or office as you?" (FT27) Responses ranged from 1 for "I worked alone" to 6 for "1,000 or more."

Low Supervision on Job: "Please think about your supervisor or the person who had most control over what you actually did on the job. Which of the following best describes how closely this person supervised you?" (FT28) Responses ranged from 1 for "My supervisor decided both what I did and how I did it" to 5 for "There was no such person."

Supervisory Responsibility: "How many people did you supervise in your job?" (Include all persons whose work you supervised as well as those for whose work you were held responsible.) (FT29)

SATISFACTION WITH 1979 JOB

These measures were derived from a factor analysis of the items in Question 14 on the Fourth Follow-Up Survey. They were prefaced with the statement, "How satisfied were you with the following aspects of this job?" Responses ranged from 1 for "Very satisfied" to 4 for "Very dissatisfied." The items were recoded and summed to reflect positive scoring on each dimension.

Pay Satisfaction: "Pay" (FT14A); "Fringe benefits" (FT14B); and "Security and permanence" (FT14H).

Work Satisfaction: "Importance and challenge" (FT14C); "Working conditions" (FT14D); "Opportunity for promotion and advancement with this employer" (FT14E); Opportunity for promotion and advancement in this line of work" (FT14F); "Opportunity to use past training and education" (FT14G); "Supervisor(s)" (FT14I); "Opportunity for developing new skills" (FT14J); "Job as a whole" (FT14K); and "The pride and respect I received from my family and friends by being in this line of work" (FT14L).

SELF-CONCEPT, LOCUS OF CONTROL, AND LIFE GOALS

These are all composite variables described as follows in Volume II, Appendix K of the NLS-72 DATA FILE USERS MANUAL: ". . . each computed as the average of the items listed . . . With the exception of family orientation, all subitems were averaged with positive unit weights. In the computation of family orientation, subitem I has a negative unit weight (i.e., family orientation = B + H - I)." Because the scaling of these measures was based on responses to the Base Year Survey, those items are listed in the following. The items were repeated in each subsequent follow-up survey. The composite for the Third Follow-Up Questionnaire (1976) is used in the data analysis.

For self-concept and locus of control, the items were prefaced with the statement, "How do you feel about each of the following statements?" Responses ranged from 1 for "Agree strongly" to 5 for "No opinion."

Self-concept (76): "I take a positive attitude toward myself"

(BQ21A); "I feel I am a person of worth, on an equal plane with others" (BQ21C); "I am able to do things as well as most other people" (BQ21D); and "On the whole, I am satisfied with myself" (BQ21H).

Locus of Control (76): "Good luck is more important than hard work for success" (BQ21B); "Every time I try to get ahead, something or somebody stops me" (BQ21E); "Planning only makes a person unhappy since plans hardly ever work out anyway" (BQ21F); and "People who accept their condition in life are happier than those who try to change things" (BQ21G).

For life goals, the items were prefaced with the statement, "How important is each of the following to you in your life?" Responses ranged from 1 for "Not important" to 3 for "Very important."

Life Goals: Work (76): "Being successful in my line of work" (BQ20A); "Having lots of money" (BQ20C); and "Being able to find steady work" (BQ20E).

Life Goals: Community (76): "Being a leader in my community" (BQ20F); "Being able to give my children better opportunities than I've had" (BQ20G); and "Working to correct social and economic inequalities" (BQ20J).

Life Goals: Family (76): "Finding the right person to marry and having a happy family life" (BQ20B); "Living close to parents and relatives" (BQ20H); and "Getting away from this area of the country" (BQ20I).

WORK GOALS (1976)

These measures were derived from a factor analysis of the items in Question 152 on the Third Follow-Up Survey. They were prefaced with

the statement, "How important is each of the following factors in determining the kind of work you plan to be doing for most of your life?" Responses ranged from 1 for "Very important" to 3 for "Not important." The items were recoded to reflect positive scoring and summed for each dimension.

Work Goals: Security (76): "Job openings available in the occupation" (TQ152C); "Good income to start or within a few years" (TQ152E); "Job security and permanence" (TQ152F); and "Opportunity for promotion and advancement in the long run" (TQ152I).

Work Goals: Autonomy (76): "Work that seems interesting and important to me" (TQ152G); "Freedom to make my own decisions" (TQ152H); and "Meeting and working with sociable, friendly people" (TQ152J).

Work Goals: Experience (76): "Previous work experience in the area" (TQ152A); "Relative or friend in the same line of work" (TQ152B); and "Work matches a hobby interest of mine" (TQ152D).

CHARACTERISTICS OF BACCALAUREATE INSTITUTION

A serious problem with the NLS-72 surveys is that none asked specifically for the name of the institution from which various degrees were awarded. Consequently, when attempting to determine the institutional source of a particular degree it is necessary to combine items about the dates of the degree with enrollment status during the corresponding time period, a rough approximation at best. For the present research, the procedure used was as follows. For respondents who got their BA's in 1976 or earlier (FT76EC), the degree source used was the October, 1975 institution (TQ67FICE). For 1977 BA's, the response for institution last attended during the period from November,

1976 through October, 1977 was used (FT105A). For 1978 BA's, the response for institution last attended during the period from November, 1977 through October 1978 was used (FT93A). For 1979 BA's, the response for institution last attended during the period from November, 1978 through October, 1979 was used (FT81A). Using this approximation procedure, it was possible to include data on the baccalaureate institution for 80.7% of the study sample.

Type: Carnegie Classification: Quality index from Carnegie council on Policy Studies in Higher Education Report, A Classification of Institutions of Higher Education, Revised Edition (Berkeley, CA: Carnegie Foundation for the Advancement of Teaching, 1976). Ranges from 1 for "Comprehensive Colleges and Universities - II" and "Liberal Arts Colleges - II" to 6 for "Research Universities - I" and "Liberal Arts Colleges - I."

Cass-Birnbaum Selectivity: Quality index from Comparative Guide to American Colleges, Ninth Edition, by James Cass and Max Birnbaum (New York; Harper & Row, 1979). Ranges from 1 for "Not selective" to 8 for "Most selective." This is a popular mass market reference book for students and their parents interested in choosing undergraduate colleges.

COLLEGE GPA AND YEARS SINCE COMPLETION OF THE BA

College GPA: Response to Question 85 on Third Follow-Up Survey (TQ85B), "Estimate how well you have done in your coursework or programs only in the 2-year period from October 1974 through October 1976. Do not include grades from graduate or professional school." Recoded to range from 1 for "Have not taken any courses for which

grades were given" to 8 for "Mostly A (3.75-4.00 grade point average."

Years Post-BA: Calculated by subtracting the year in which the baccalaureate was received (FT76EC) from 1979.